

The safety and efficacy of treatment with self-expandable braided stents (LEO and LVIS) required further investigation.

PURPOSE: Our aim was to analyze the outcomes after treatment with braided stents.

DATA SOURCES: A systematic search of 3 databases was performed for studies published from 2006 to 2017.

STUDY SELECTION: According to Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, we included studies reporting patients treated with LEO or LVIS stents.

DATA ANALYSIS: Random-effects meta-analysis was used to pool the following: aneurysm occlusion rate, complications, and neurologic outcomes.

DATA SYNTHESIS: Thirty-five studies evaluating 1426 patients treated with braided stents were included in this meta-analysis. Successful stent delivery and complete aneurysm occlusion were 97% (1041/1095; 95% CI, 95%-98%) ($I^2 = 44\%$) and 88.3% (1097/1256; 95% CI, 85%-91%) ($I^2 = 72\%$), respectively. Overall, treatment-related complications were 7.4% (107/1317; 95% CI, 5%-9%) ($I^2 = 44\%$). Ischemic/thromboembolic events (48/1324 = 2.4%; 95% CI, 1.5%-3.4%) ($I^2 = 27\%$) and in-stent thrombosis (35/1324 = 1.5%; 95% CI, 0.6%-1.7%) ($I^2 = 0\%$) were the most common complications. Treatment-related morbidity was 1.5% (30/1324; 95% CI, 0.9%-2%) and was comparable between the LEO and LVIS groups. Complication rates between the anterior (29/322 = 8.8%; 95% CI, 3.4%-12%) ($I^2 = 41\%$) versus posterior circulation (10/84 = 10.5%; 95% CI, 4%-16%) ($I^2 = 0\%$) and distal (30/303 = 8%; 95% CI, 4.5%-12%) ($I^2 = 48\%$) versus proximal aneurysms (14/153 = 9%; 95% CI, 3%-13%) ($I^2 = 46\%$) were comparable ($P > .05$).

LIMITATIONS: Limitations were selection and publication biases.

CONCLUSIONS: In this analysis, treatment with the LEO and LVIS stents was relatively safe and effective. The most common complications were periprocedural thromboembolisms and in-stent thrombosis. The rate of complications was comparable among anterior and posterior circulation aneurysms, as well as for proximal and distally located lesions ¹⁾.

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Cagnazzo F, Cappucci M, Lefevre PH, Dargazanli C, Gasco G, Morganti R, Mazzotti V, di Carlo D, Perrini P, Mantilla D, Riquelme C, Bonafe A, Costalat V. Treatment of Intracranial Aneurysms with Self-Expandable Braided Stents: A Systematic Review and Meta-Analysis. *AJNR Am J Neuroradiol*. 2018 Nov;39(11):2064-2069. doi: 10.3174/ajnr.A5804. Epub 2018 Sep 27. PubMed PMID: 30262643.

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